

**GREAT BASIN RESEARCH &
MANAGEMENT PARTNERSHIP**

Cross-boundary Management in a Changing Environment - A New Era of Collaboration

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[Land Ownership



Great Basin Mojave

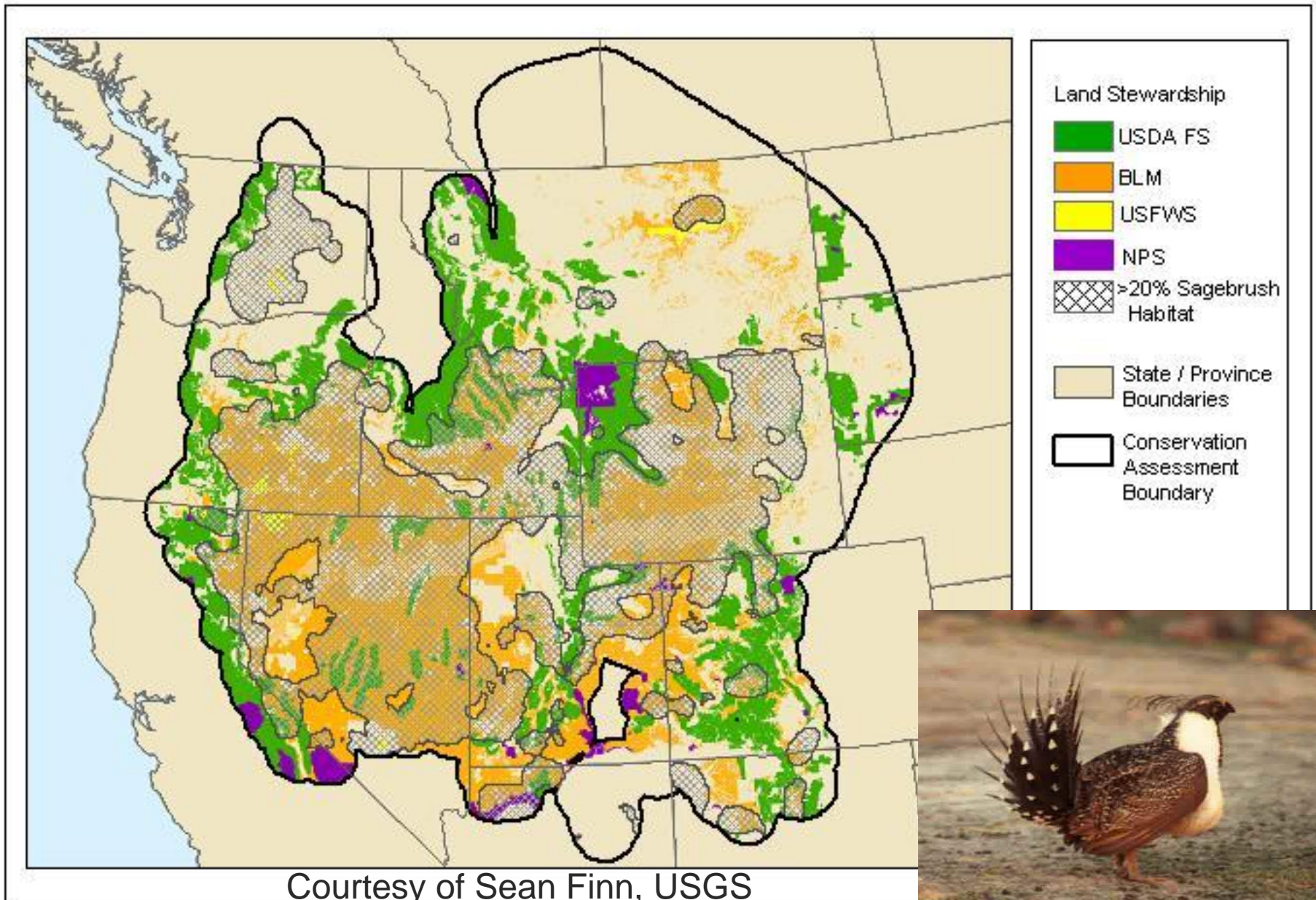
Acres	145,547,718	19,017,000
Bureau of Land Management	53.9%	43.0%
Bureau of Reclamation	0.0%	0.4%
Department of Defense	2.5%	7.2%
Department of Energy	0.5%	1.6%
National Park Service	0.6%	14.6%
Private	22.3%	16.7%
State	2.6%	4.2%
Tribal	1.0%	1.5%
U.S. Forest Service	14.0%	7.6%
U.S. Fish and Wildlife Service	0.9%	3.2%
Miscellaneous	1.4%	
TOTAL	100.0%	100.0%

Federal ~ 75%

Private ~ 20%

State, Tribes, Local ~ 5%

Sage Grouse Conservation Assessment Boundary



Effects of Administrative Boundaries

- Lead to ecological boundary zones
- Caused by differences in land use, policies and management among and within agency boundaries
 - Grazing regimes & water sources
 - Fire management
 - Fuels treatments
 - ESR seeding treatments



Effects of Administrative Boundaries

- Cause ecological change and affect resilience
- Filter, block or concentrate movement of such diverse things as animals, seeds, fire, soils, water and nutrients
- Result in different structural and functional characteristics; species composition and abundance, biogeochemical cycling, erosional processes, albedo
 - Hinder species abilities to persist or migrate in response to climate change
 - Alter or exacerbate interacting effects of disturbance



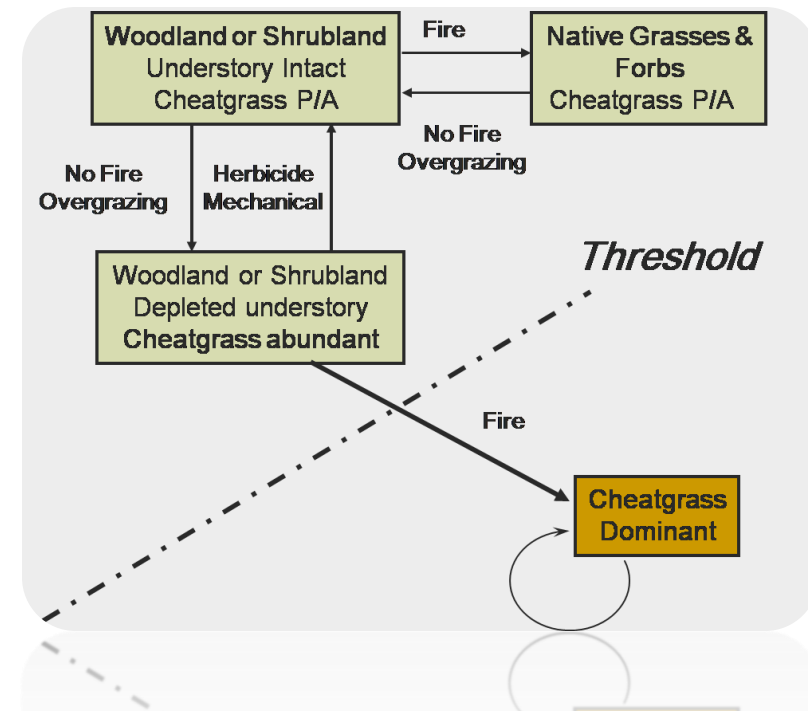
Science & Management Needs

- Mechanisms for addressing larger scales & longer time frames
- Assessment and planning is needed that transcends boundaries within and across agencies
 - Common map bases accessible to all
 - Current baselines
 - Regional network of monitoring sites
 - Common databases of land treatments and monitoring results



Science & Management Needs

- Mechanisms for prioritizing management across agencies at landscape scales
- Basic ecological understanding of several critical factors
 - Landscape connectivity
 - Ecological resilience
 - Ecological thresholds
- Adaptation strategies to reduce risk of adverse environmental outcomes



Collaboration Needs

- Adapting to climate change will require an unprecedented level of communication and cooperation

Federal – State – Local – Tribal – Private - NGO

- Facilitating adaptation will require addressing -
 - Need for landscape-scale management approaches
 - Existing effects of administrative boundaries
 - Organizational/policy/social constraints that impede cross-boundary management

[Effective Collaboration



- Effective collaboration occurs at multiple levels
- Agencies – Mandates, approaches to management and agency cultures differ among agencies
 - Environmental laws and policies can foster collaboration (Endangered Species Act 1973)
 - Regulatory hooks can be used to induce cooperation (USFWS Habitat Conservation Plans)
 - Iterative planning processes can facilitate periodic realignment

Effective Collaboration

- Within agencies – Professional and resource loyalties and multiple resource mandates affect collaboration
 - Increase administrative support for interdisciplinary training and collaborative activities
 - Develop networks of experts - Interdisciplinary teams of resource specialists; interagency specialists, scientists, extension
- Agencies and private individuals – Differences in social norms and perceptions about federal agencies can make collaboration challenging
 - Public meetings and public forums
 - Create new mechanisms for effective outreach to the public

Clearinghouse of Information

- Adaptive management based on collaboration requires readily accessible information on current research & collaborative activities - “who’s doing what where”
- Great Basin Research & Management Project & USGS NBII Great Basin Information Project are developing a web-based clearinghouse for the Great Basin
 - Searchable Database of Collaborative Programs
 - Experts Database
 - Research Catalog (The Science Locator)
 - Bibliography
 - Metadata Server
 - Upcoming Meetings and Links

[Collaborative Networks

- Acquiring information on the collaborative efforts, experts and research & management projects allows us to -
 - Identify existing collaborative networks
 - Determine linkages and develop mechanisms for information sharing
 - Expand and help focus existing collaborative efforts
 - Facilitate new teams to address emerging issues
 - Leverage limited funds, increase efficiency and reduce overlap



Collaborative Networks

- Building on existing collaborative networks can facilitate adaptation
- In the Great Basin, these include regional and state, place-based, research & management oriented, and information-based collaboratives
- New federal initiatives have the potential to address science and management information needs and to facilitate collaboration
 - DOI Landscape Conservation Cooperatives (LCC)
 - DOI USGS Climate Science Centers
 - National Ecological Observatory Network

The Road Forward

- Climate change necessitates collaborative research & management that effectively crosses administrative boundaries
- Increase understanding of connectivity, resilience, thresholds
- Develop adaptation strategies
- Obtain consensus on priorities
- Conduct cross-boundary strategic planning
- Leverage resources to implement activities & monitor outcomes
- Collectively determine if adjustments are needed





Photo courtesy of Nolan Preece